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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,041	07/18/2007	Hajime Nakayama	1032879-000076	8976

21839 7590 10/14/2011  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
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GUGLIOTTA, NICOLE T

ART UNIT	PAPER NUMBER
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1783

NOTIFICATION DATE	DELIVERY MODE
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10/14/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/594,041	<b>Applicant(s)</b> NAKAYAMA ET AL.	
	<b>Examiner</b> NICOLE GUGLIOTTA	<b>Art Unit</b> 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 5) ☒ Claim(s) 1 - 8, 10 - 13, 21 - 34 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1 - 8, 10 - 13, 21 - 34 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/28/2011, 9/14/2011</u> .                                    | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Examiner's Note***

The Examiner acknowledges the amendments to claims 1, 5, 8 & 12-13, the addition of claims 21 – 34, and the cancellation of claims 9 & 14 - 20.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**1. Claims 1 – 8, 10, 13, 21 – 23 & 26 – 33 are rejected under 35**

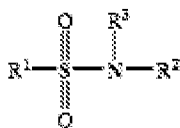
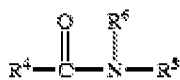
**U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nimura et al. (US 2005/0208231 A1).**

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Nimura et al. teach a liquid crystal display (LCD) employing IPS mode (paragraph [0007]) (**claims 13 & 23**) comprising a transparent retardation film positioned between two polarizers within the LCD. The retardation film contains wavelength dispersion regulating agents with an ultraviolet region of 200 - 400 nm and is expected to have the wavelength dispersion of  $R_e$  and  $R_{th}$  of the compound itself larger at the shorter wavelength side (paragraph [0222]) (**claim 1**). In addition, the wavelength dispersion regulating agents are capable of

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reducing  $|R_{th}(400) - R_{th}(700)|$  of the film (**claims 6, 30 & 32**). The retardation film can be a norbornene-based film (**claims 2 & 26**) or a cellulose acylate film (**claims 3 & 27**) (paragraphs [0012], [0165] & [0174]) and has a thickness of preferably 20 - 500  $\mu\text{m}$  (paragraph [0168]) (**claims 10 & 33**). When the cellulose acylate film is the retardation film of choice, the cellulose acylate is substituted with acetyl, propionyl and/or butanoyl groups (paragraph [0182]), and has a degree of substitution of from 2.50 to 3.00 and a degree of total acyl substitution from 2.60 to 3.00 (paragraph [0183]) (**claims 4 & 28 and claims 5 & 29**, respectively). The retardation film includes a retardation/optical anisotropy reducing agent with an octanol-water distribution coefficient (log P value) within a range of 0 – 7 (paragraph [0197]), in the amount of 0.01 to 30 wt % (paragraph [0202]) (**claims 6, 7 & 30 - 31**). Such compounds include the following:

(paragraph [0209]) (**claims 8 & 24, formula 13**)(paragraph [0211]) (**claims 8 & 24, formula 18**)(paragraph [0212]) (**claims 8 & 24, formula 19**)

The optical anisotropy reducing compounds has an average content, in a portion from at least a surface of the cellulose acylate film to a position of 10% of

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the total film thickness, of 80 to 99% of an average content of such compound in a central portion of the cellulose acylate film (paragraph [0205]) (**claim 21**).

Nimura et al. teach a protective cellulose ester film made by substantially the same process and comprising the same components (i.e. cellulose acylate or norbornene resins, wherein cellulose acetate butylate or cellulose acetate propionate has a degree of substitution in the range of 2.50 to 3.00, a retardation/optical anisotropy reducing agent as claimed by Applicant (see discussion of claim 8), and UV absorbents as Applicant's claimed invention. Therefore, it would be reasonable to believe protective film taught by Nimura et al. would have the same retardation values for  $R_e(\lambda)$  and  $R_{th}(\lambda)$  as claimed by Applicant in **claims 1 & 13**. It also would be reasonable to believe the amount of light leakage in the black state at an azimuth angle of 45 degrees and at a polar angle of 60 degrees would be at most 0.022% (**claim 22**).

MPEP 2112 [R-3] states:

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness." *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983).

It has been held that where the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a prima facie case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433

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(CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

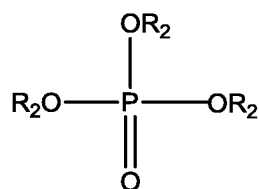
**2. Claims 1 – 7, 10, 13, 22 – 23 & 26 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takatoshi (JP 2001-163995 A), in view of Yano et al. (US 2003/0210370 A1), and further in view of Nimura et al. (US 2005/0208231 A1).**

The applied reference (Nimura et al.) has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as

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prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Takatoshi teaches a liquid crystal device comprising a cellulose acylate protective film for a polarizing plate. The protective film has a thickness of 20 – 200 micrometers (paragraph [0081]) (**claims 10 & 33**) and comprises cellulose ester compounds, such as cellulose acetate butylate and cellulose acetate propionate, with a degree of substitution in the range of 2.6 - 3.0 (paragraph [0031]) (**claims 3 – 5 & 27 - 29**), along with phosphoric ester compounds capable of reducing  $Re(\lambda)$  and  $Rth(\lambda)$  and having a Log p value from 0 – 7, present in the amount of 0.5 – 30 mass % (paragraph [0044]) with the following chemical structure (paragraph [0015]) (Takatoshi's "general formula 3") (**claims 6 - 7 & 30 – 31**):



Takatoshi fails to teach a thermoplastic norbornene resin (Applicant's claim 2).

Yano et al. teach the use of a thermoplastic norbornene resin in combination with cellulose ester polymer (paragraphs [0039] & [0043]) to form a film for a liquid crystal display device. Thermoplastic norbornene resin is excellent in heat resistance, wet endurance and weather ability. Norbornene resin in a transparent film provides a film with stable retardation values (paragraphs [0017] & [0045]) (**claims 2 & 26**). In addition, Yano et al. teach their



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retardation (Re and Rth) values, which overlap with the ranges taught by Takatoshi, are especially preferable for liquid crystal display devices operating in IPS mode because such retardation values solve the problem of optical leakage in a direction shifted from an optical axis (paragraphs [0002], [0016] & [0018] - [0019]) (**claims 13 & 23**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add thermoplastic norbornene resin to the cellulose protective film taught by Takatoshi because it provides excellent heat resistance, wet endurance and weather ability to the cellulose protective film. It also would have been obvious to one of ordinary skill in the art that a film comprising the retardation values as taught by Takatoshi and Yano et al. are preferable for liquid crystal displays operating in IPS mode due to the lack of optical leakage in a direction shifted from an optical axis, based on the teachings of Yano et al.

Takatoshi teaches a UV absorbent should be used in the protective film of the invention, but fails to specify the properties of said UV absorbent.

Nimura et al. teach wavelength dispersing/controlling agent (UV absorbent) which has an absorption in the range of 200 and 400 nm, and is expected to have the wavelength dispersion of Re and Rth of the compound itself larger at the shorter wavelength side. This type of UV absorbent is capable of reducing  $|R_{th}(400) - R_{th}(700)|$  of the film (**claim 32**) provides excellent spectral transmittance (paragraphs [0222] – [0223]) (**claim 1**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a wavelength dispersing/controlling agent (UV

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absorbent) which has an absorption in the range of 200 and 400 nm and has a wavelength dispersion larger at the shorter wavelength side in the film taught by Takatoshi in order to provide excellent spectral transmittance, based on the teachings Nimura et al.

The combination of Takatoshi, Yano et al. & Nimura et al. teach a protective cellulose ester film made by substantially the same process and comprising the same components (i.e. cellulose acetate butylate or cellulose acetate propionate with a degree of substitution in the range of 2.5 to 3.0, a retardation reducing agent such as phosphoric ester compounds present in the amount of 1 – 30 mass %, thermoplastic norbornene resins) and UV absorbents as Applicant's claimed invention. Therefore, it would be reasonable to believe protective film taught by the combination of Takatoshi, Yano et al. & Nimura et al. would have the same retardation values for  $R_e(\lambda)$  and  $R_{th}(\lambda)$  as claimed by Applicant in **claims 1 & 13**. It also would be reasonable to believe the amount of light leakage in the black state at an azimuth angle of 45 degrees and at a polar angle of 60 degrees would be at most 0.022% (**claim 22**).

MPEP 2112 [R-3] states:

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness." *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983).

It has been held that where the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a prima facie case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

**3. Claims 11 – 12 & 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nimura et al. or over Takatoshi , Yano et al. & Nimura et al., as applied to claim 1 above, and further in view of Yoji (JP 2003-057415A).**

The references discussed above are silent in regard to the presence of an optical compensatory film having  $R_e(630)$  from 0 to 200 nm and the absolute value of  $R_{th}(630)$  from 0 to 400 nm in a liquid crystal display apparatus.

Yoji teach an optical anisotropic layer (Applicant's "optical compensatory film") for an LCD, wherein the layer has a  $R_e$  retardation value in the range of 0 - 200 nm and an  $R_{th}$  in the range of 70 – 400 nm so that the optical anisotropic layer may play an important role optically (paragraph [0094]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include an optical compensatory (anisotropic) film with

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retardation values in the range of  $R_e = 0 - 200$  nm and  $R_{th} = 70 - 400$  within the applied to the polarizer to form the polarizing plate of the liquid crystal display taught by Takatoshi and Yano et al. in order to contribute to the optical properties of the LCD, based on the teachings of Yoji.

### ***Response to Arguments***

4. The Examiner notes the amendment to claim 12. Applicant's arguments with respect to the objection of claim 12 have been fully considered and are persuasive. The objection of 12 has been withdrawn.

5. Applicant's arguments filed July 19, 2011 with respect to the presently pending claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

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period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE GUGLIOTTA whose telephone number is (571)270-1552. The examiner can normally be reached on M - F 8:30 a.m. - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1783

/NICOLE T GUGLIOTTA/  
Examiner, Art Unit 1783